

CLAIMS

What is claimed is:

1. A method for routing packets through a switching network, wherein the switching network includes multiple stages of switching elements, each one of the switching elements receiving packets as local input packets on its input ports and producing packets as local output packets on its output ports, each of the packets having a plurality of in-band control signals where each one of the in-band control signals is utilized in a corresponding one of the switching elements as the local in-band control signal for the corresponding switching element to make switching decisions, the method comprising
  - 10 coding each one of the in-band control signals of the packets into a plurality of bits based on a predetermined coding algorithm, and generating, with reference to the coding scheme, the output bits of the local output packets at each one of the switching elements based on a subset of the bits in the corresponding one of the in-band control signals for said each one of the switching elements to route the local input packets arriving at the corresponding switching element.

2. The method as recited in claim 1 wherein

each one of the switching elements is a bicast cell,

the local input packets to each one of the switching elements includes idle,

0-bound, 1-bound and broadcast packet types wherein each one of the packet types

corresponds to a distinct in-band control signal,

the coding includes coding each of the in-band control signals by at least

- 5** two bits, and

the coding algorithm includes coding the bits such that the first bit of the code for the in-band control signal corresponding to a 0-bound packet type is different from the first bit of the code for the in-band control signal corresponding to a 1-bound packet type.

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